



RECEIVED MAR 29 2002

RE

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Figure 1

Met Ile Phe Gly Val Asn Thr Arg Gln Asn Leu Asp His Val Lys Glu Ser Lys Thr Gly Ser Ser Gly Ile Ile Val Arg Leu Ser Thr	30
Asn His Phe Arg Leu Thr Ser Arg Pro Gln Trp Ala Leu Tyr Gln Tyr His Ile Asp Tyr Asn Pro Leu Met Gln Ala Arg Arg Leu Arg	60
Ser Ala Leu Leu Phe Gln His Glu Asp Leu Ile Gly Lys Cys His Ala Phe Asp Gly Thr Ile Leu Phe Leu Pro Lys Arg Leu Gln Gln	90
Lys Val Thr Glu Val Phe Ser Lys Thr Arg Asn Gly Glu Asp Val Arg Ile Thr Ile Thr Leu Thr Asn Glu Leu Pro Pro Thr Ser Pro	120
Thr Cys Leu Gln Phe Tyr Asn Ile Ile Phe Arg Arg Leu Leu Lys Ile Met Asn Leu Gln Ile Gly Arg Asn Tyr Tyr Asn Pro Asn	150
Asp Pro Ile Asp Ile Pro Ser His Arg Leu Val Ile Trp Pro Gly Phe Thr Thr Ser Ile Leu Gln Tyr Glu Asn Ser Ile Met Leu Cys	180
Thr Asp Val Ser His Lys Val Leu Arg Ser Glu Thr Val Leu Asp Phe Met Phe Asn Phe Tyr His Gln Thr Glu His Lys Phe Gln	210
Glu Gln Val Ser Lys Glu Leu Ile Gly Leu Val Val Leu Thr Lys Tyr Asn Asn Lys Thr Tyr Arg Val Asp Asp Ile Asp Trp Asp Gln	240
Asn Pro Lys Ser Thr Phe Lys Ala Asp Gly Ser Glu Val Ser Phe Leu Glu Tyr Tyr Arg Lys Gln Tyr Asn Gln Glu Ile Thr Asp	270
Leu Lys Gln Pro Val Leu Val Ser Gln Pro Lys Arg Arg Gly Pro Gly Gly Pro Gly Pro Ala Met Leu Ile Pro Glu Leu	300
Cys Tyr Leu Thr Gly Leu Thr Asp Lys Met Arg Asn Asp Phe Asn Val Met Lys Asp Leu Ala Val His Thr Arg Leu Thr Pro Glu Gln	330
Arg Gln Arg Glu Val Gly Arg Leu Ile Asp Tyr Ile His Lys Asn Asp Asn Val Gln Arg Glu Leu Arg Asp Trp Gly Leu Ser Phe Asp	360
Ser Asn Leu Leu Ser Phe Ser Gly Arg Ile Leu Gln Thr Glu Lys Ile His Gln Gly Gly Lys Thr Phe Asp Tyr Asn Pro Gln Phe Ala	390
Asp Trp Ser Lys Glu Thr Arg Gly Ala Pro Leu Ile Ser Val Lys Pro Leu Asp Asn Trp Leu Ile Tyr Thr Arg Arg Asn Tyr Glu	420
Ala Ala Asn Ser Leu Ile Gln Asn Leu Phe Lys Val Thr Pro Ala Met Gly Met Gln Met Arg Lys Ala Ile Met Ile Glu Val Asp Asp	450
Arg Thr Glu Ala Tyr Leu Arg Val Leu Gln Gln Lys Val Thr Ala Asp Thr Gln Ile Val Val Cys Leu Leu Ser Ser Asn Arg Lys Asp	480
Lys Tyr Asp Ala Ile Lys Iys Tyr Leu Cys Thr Asp Cys Pro Thr Pro Ser Gln Cys Val Val Ala Arg Thr Leu Gly Lys Gln Gln Thr	510

Figure 1
Continued

Val Met Ala Ile Ala Thr Lys Ile Ala Leu Glu Met Asn Cys Lys Met Gly Glu Leu Tri Arg Val Asp Ile Pro Leu Lys Leu Val 540
Met Ile Val Gly Ile Asp Cys Tyr His Asp Met Thr Ala Gly Arg Arg Ser Ile Ala Gly Phe Val Ala Ser Ile Asn Glu Gly Met Thr 570
Arg Tri Phe Ser Arg Cys Ile Phe Gln Asp Arg Gly Gln Glu Leu Val Asp Gly Leu Lys Val Cys Leu Gln Ala Leu Arg Ala Trip 600
Asn Ser Cys Asn Glu Tyr Met Pro Ser Arg Ile Ile Val Tyr Arg Asp Gly Val Gly Asp Gly Gln Leu Lys Thr Leu Val Asn Tyr Glu 630
Val Pro Gln Phe Leu Asp Cys Leu Lys Ser Ile Gly Arg Gly Tyr Asn Pro Arg Leu Thr Val Ile Val Val Lys Lys Arg Val Asn Thr 660
Arg Phe Phe Ala Gln Ser Gly Gly Arg Leu Gln Asn Pro Leu Pro Gly Thr Val Ile Asp Val Glu Val Thr Arg Pro Glu Tri Tyr Asp 690
Phe Phe Ile Val Ser Gln Ala Val Arg Ser Gly Ser Val Ser Pro Thr His Tyr Asn Val Ile Tyr Asp Asn Ser Gly Leu Lys Pro Asp 720
His Ile Gln Arg Leu Thr Tyr Lys Leu Cys His Ile Tyr Tyr Asn Tri Pro Gly Val Ile Arg Val Pro Ala Pro Cys Gln Tyr Ala His 750
Lys Leu Ala Phe Leu Val Gly Gln Ser Ile His Arg Glu Pro Asn Leu Ser Leu Ser Asn Arg Leu Tyr Tyr Leu 775

Figure 1
Continued

PIWI	MADDQGRGRRRPLNEDDSSTS	RGSGDGPRVKVFRGSSSGDPRADPRI	ASRERRALEEAPR	
	M	F	G	R L 61
HIWI	M-----	-----IF-----G-----	VNTRQNL	DHV--
PIWI	REGGPPERKPWDQYDYL	NTRPVELVSKKGTDGVPVMLQTNFFRL	KTPPEWRIVHYHVEFE	
	K	E SK G+ G+ V L TN FRL	++P+W + YH+++	122
HIWI	-----K-----	-----E-----SKTGS	GGIIVRLSTNH	FRLTSRPQWALYQYHIDYN
PIWI	PSIENPRVRMGVLSNHAN	LLGSGYLFDGLQLFTTRK	FEQEITVLSGKS	KLDIEYKISIKFV
	P + E R+R +L H +L+G + FDG	LF ++ +Q++T + K++ + +I+I		183
HIWI	PLMEARRLRSALLFQHED	DLIGKCHA	FDGTILFLPKRLQQKV	TEFSKTRNGEDVRITITLT
PIWI	GFISCAEPRFLQVLNL	LILRRSMKGLN	ELVGRNLFDPRAKIEIRE	FKMELWPGYETSIRQH
	+ P LQ N+I RR +K +NL+ +GRN	++P I+I ++ +WPG+ TSI Q+		244
HIWI	NELPPTSP	TCLOFYNIIFR	LLLKIMNLQQI	GRNYYNPNDPIDIPSHRLV
PIWI	EKDILLGTEITHKVMRTETIYD	IMRRC	SHNPARH--QDEV	RVNVLDLIVLTDYNNRTYRIN
	E I+L T+++HKV+R+ET+ D M	H H Q++V ++ L+VLT	YNN+TYR++	305
HIWI	ENSIMLCTDVSHKVL	RSSETVLD	DFMFNFYHQTEEHKFQE	QVSKELIGLVVLT
PIWI	DVDFGQTPKSTF-SCKGRDISF	VEYYLT	KYNIRIRDHNQPLLISK	-NRDKALKTNASELUV
	D+D+ Q PKSTF G ++SF+EYY +YN	I D QP+L+S+ R +		366
HIWI	DIDWDQNP	KSTFKADGSEVS	FLEYYRKQYQ	EQTIDLKQPVLVSQPKRRRGPGGTLFGPAM
PIWI	LIPELCRV	TGLNAEMRSNF	QLMRAMSSYTRMNP	KQR---TDR
	LIPELC +TGL +MR++F +M+ ++ +TR+ P+QR	RL + H+ N	RFLNHRLQNT	PESVKVLR
HIWI	LIPELCYLTGL	TDKMRND	FNVMKDLAVHTRL	TPEQRQREVGR
PIWI	DWNMELDKNVTEVQ	GRII	QQNIVFHNGKVPAGEN	EN
	DW + D N+ GRI+ + I H G	N ADW + R	ADWQRHFRDQRML	LDGDRW
HIWI	DWGLSFDSNLLSFS	GRILQTEKI	TPQFADWSKETRGA	PLISVKP--LDNW
PIWI	AVIAPQRNSHELRT	LLDSLYRAAS	GMGLRIRSPQEF	FEIYDDRTGTVRAMDDCVRSDPKLI
	+I +RN +L+ +L++ MG+++R	I DDRT Y+R + V	+D++++	549
HIWI	LLIYTRRN	YEANS	LIQNLFKVTPAMGMQMRK	-AIMIEVDDRTEAYRLV
PIWI	LCLVPNDNAERYSS	SIKKRGYV	DRAVPTQV	TLKTTKPYSLMSIATKIAIQLNCKLGYTPW
	CL+ ++ ++Y +IKK D P+Q V	+T K ++M+IATKIA+Q+NCK+G	W	610
HIWI	VCLLSSNRKD	YDAIK	KKLCTDCPTPSQC	VARTLKGQQTVMAIATKIALQMNCKMGELW
PIWI	MIELPLSGLMTIGFDIAK	STRDRKRAYGALIAS	MDLQQNSTYF	STVTECSAFDVLANTLWP
	++PL +M +G D +R+ +AS++ + + +FS	L+ L		671
HIWI	RVDIPLKLV	MIVGIDCY	HDMTAGRRSIAGFV	ASIN-EGMTRWF
PIWI	MIAKALRQYQHEHRKLP	SRIVFYRDGVSSGSL	KQLF	FEFEVKDII
	++ ALR + + +PSRI+ YRDGV G LK L	+EV ++ LK+	IEKLKTEYARVQL	SPPQL
HIWI	CLQAALRAWNSC	NEYMP	SIIVYRDGVGDQL	KLTVN
PIWI	AYIVVTRSMNTRFF	LNQ	NP	PPGTIVDDVITLP
	IVV + +NTRFF QNP	PGT++D +T PE	PERYDFYLV	SQQVRQGT
HIWI	TVIVVKKRVNTRFF	YRDGV	YDF++VSQ VR	VSPTSYNV
PIWI	LYSSMGLSPEKM	QKLTYKMCHLY	YNSGTT	RVPAVCQYAKKLATLVG
	+Y + GL P+ +Q+LTYK+CH+YYNW G	RVPA CQYA KLA	GTNLHSIPQNALEK	854
HIWI	IYDNGSLKPDH	IQRLTYKLCHI	YYNWPGVIRV	PAPCQYAHKLAFLVGQSIHREPNL
PIWI	KFYYL			
	+ YYL 859			
HIWI	RLYYL			

Figure 1
Continued

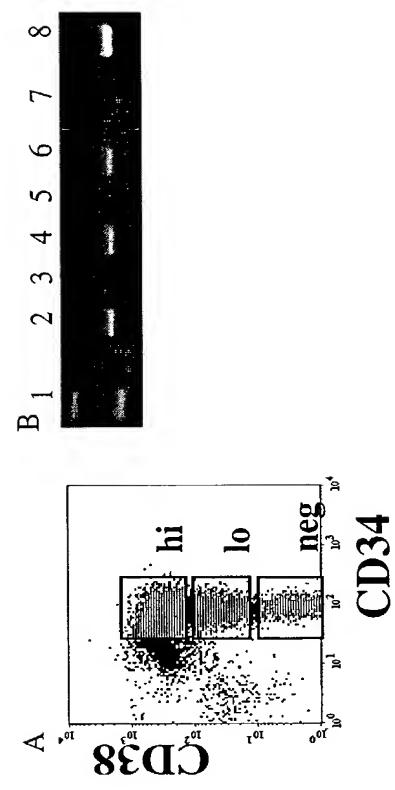


Figure 2

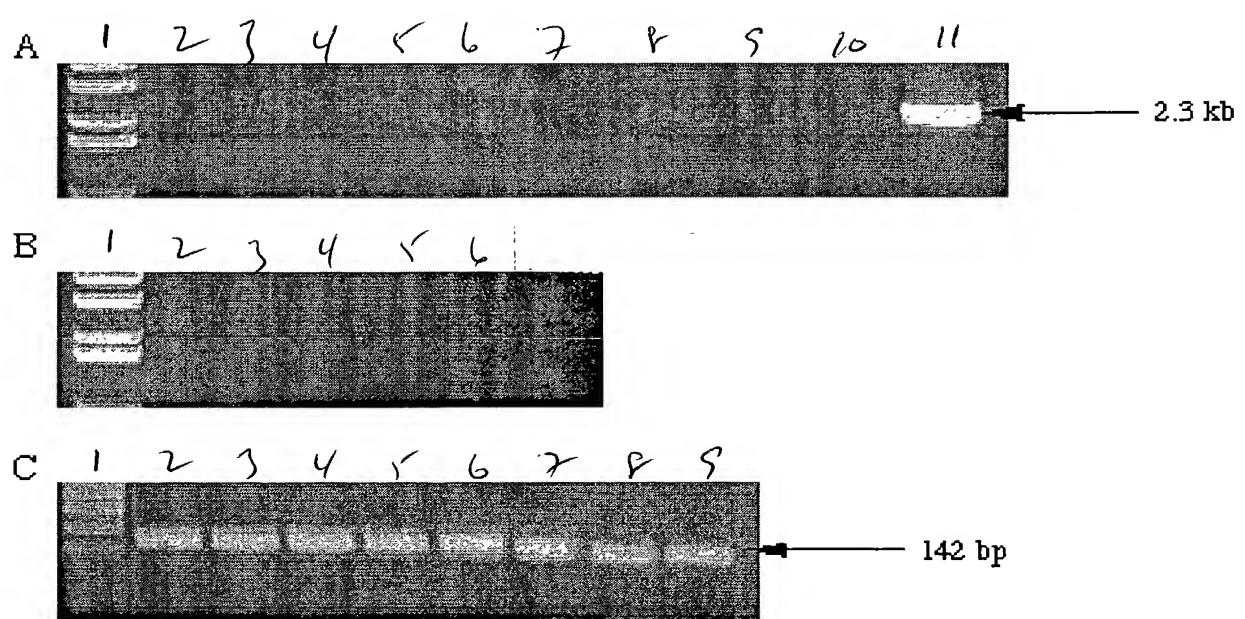


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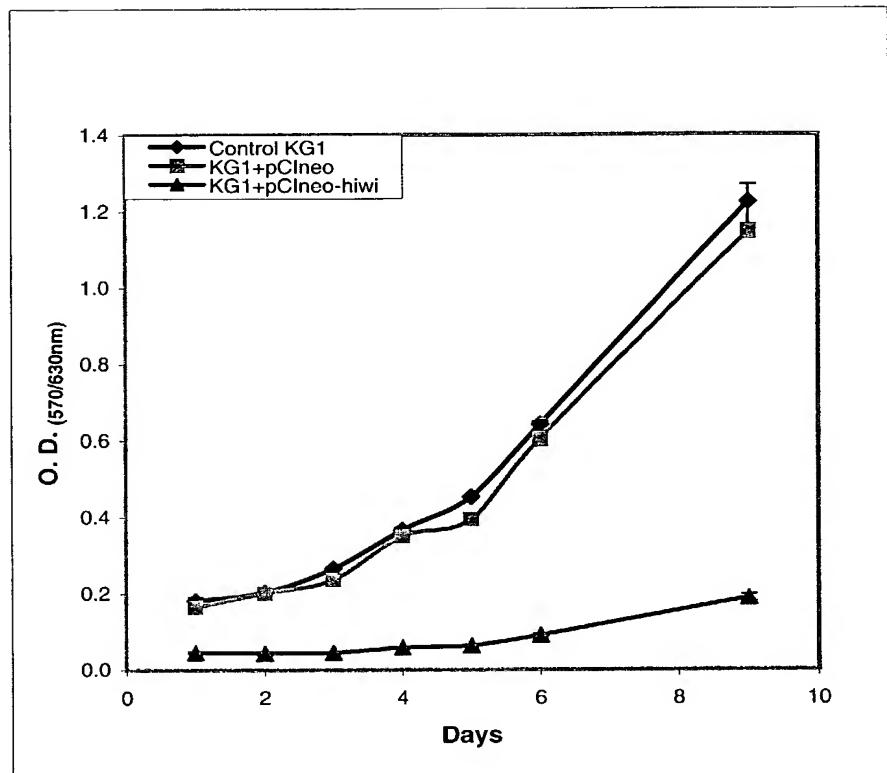


Figure 4

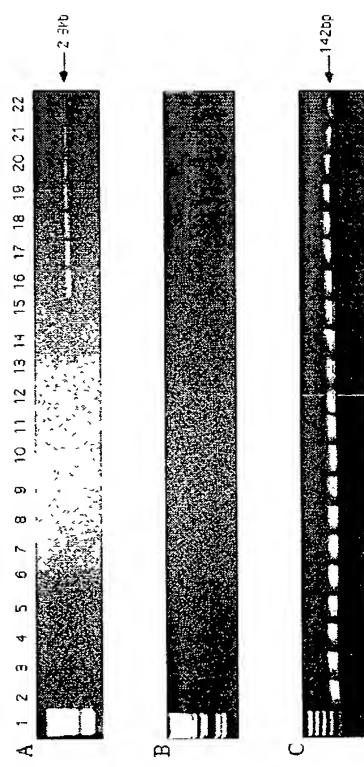
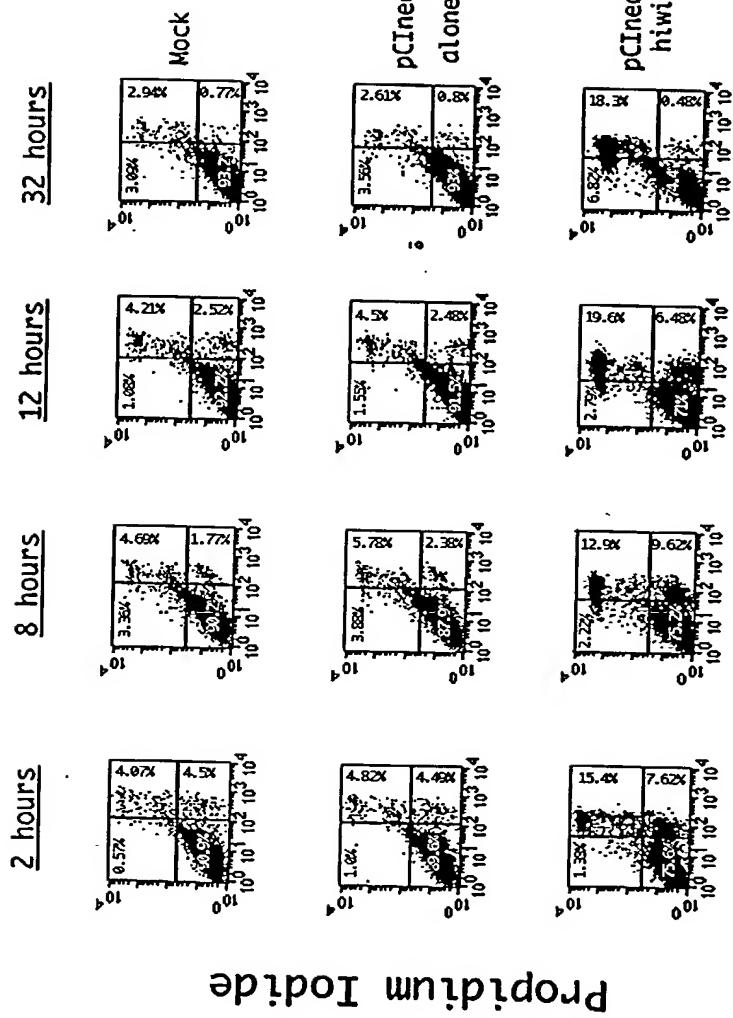


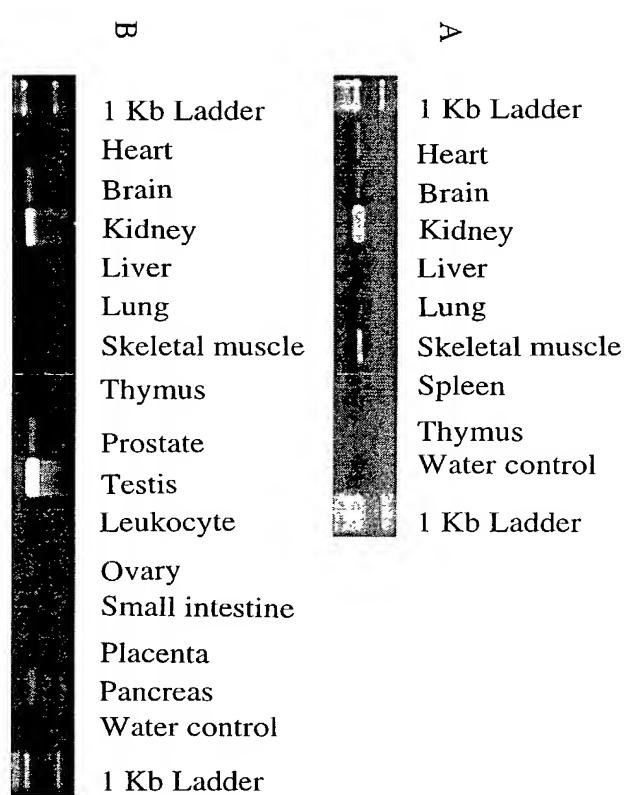
Figure 5



Annexin V

Figure 6

Figure 7



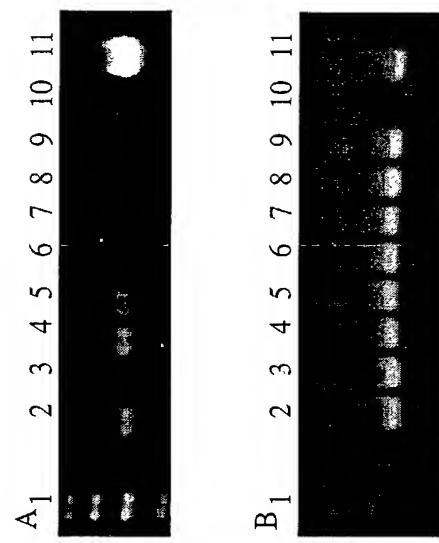


Figure 8



Figure 9

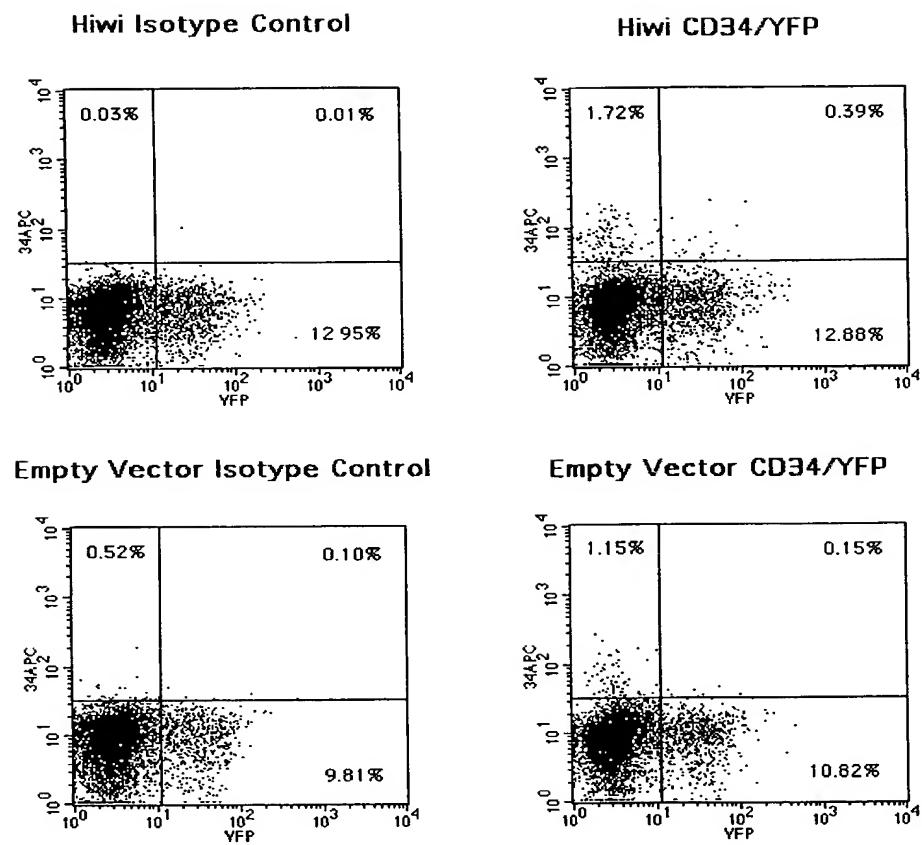


Figure 10